

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/089773 A1

(51) International Patent Classification⁷: **A61K 31/70**,
31/34

(21) International Application Number:
PCT/US2005/009069

(22) International Filing Date: 18 March 2005 (18.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/554,228 18 March 2004 (18.03.2004) US

(71) Applicants (for all designated States except US): **FAS-GEN, LLC** [US/US]; Bayview Medical Campus, 5210 Eastern Avenue, Baltimore, MD 21224 (US). **THE JOHNS HOPKINS UNIVERSITY** [US/US]; 3400 N. Charles Street, Baltimore, MD 21218 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RONNETT, Gabrielle, V.** [US/US]; Department of Neuroscience, 1006B Preclinical Teaching Building, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205 (US). **KUHAJDA, Francis, P.** [US/US]; Department of Neuroscience, 1006B Preclinical Teaching Building, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205 (US). **THUPARI, Jagan, N.** [US/US]; Department of Neuroscience, 1006B Preclinical Teaching Building, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205 (US). **LANDREE, Leslie, E.** [US/US]; Department of Neuroscience, 1006B Preclinical Teaching Building, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205 (US). **MORAN, Timothy, H.** [US/US]; Department of Neuroscience, 1006B Preclinical Teaching Building, Johns

Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205 (US). **KIM, Eun-Kyoung** [US/US]; Department of Neuroscience, 1006B Preclinical Teaching Building, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205 (US).

(74) Agent: **WILSON, Whitney, N.**; Covington & Burling, 1201 Pennsylvania Avenue, N.W., Washington, DC 20004-2401 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2005/089773 A1

(54) Title: CONTROL OF FEEDING BEHAVIOR BY CHANGING NEURONAL ENERGY BALANCE

(57) Abstract: Obesity is a worldwide health issue, affecting children and adults in developed and developing countries. Obesity is a disorder of both energy metabolism and appetite regulation, and may be understood as a dysfunction of energy balance. Applicants have found a means for regulating food intake by a subject by administering a compound to the subject which affects neuronal energy balance. Applicants have found a means for regulating food intake by a subject administering a compound to the subject which targets the activity of AMPK, in particular inhibiting activation, in particular hypothalamic. Applicants have also found a method of inducing weight loss in a subject by decreasing the subjects appetite by administering a compound to the subject which increases the subject's neuronal energy balance.